## **Section I:**

# AMENDMENT UNDER 37 CFR §1.121 to the CLAIMS

## Claim 1 (currently amended):

A method for allowing an Internet or intranet browser user to <u>conveniently</u> transfer directly to a domain that is participating in an e-community without repetitious and redundant authentication actions, said e-community comprising a plurality of affiliated domain servers, said user being properly registered and authenticated to a home domain server within said e-community, said method comprising the steps of:

automatically enrolling said user at [[an]] at a group of affiliated domain domain within said e-community through exchange of a single home domain identity cookie shared among said plurality of affiliated domains with enrollment request and an affiliated domain identity cookie with enrollment response success indicator between said home domain server and an affiliated domain server by:

- (a) defining a minimal group of affiliated domains for automatic enrollment corresponding to a condition selected from the group of user's home domain, and a common set of domains required by all users participating in a given e-community;
- (b) providing a single-sign-on plug-in to said home domain and to each of said affiliated e-community domains;
- responsive to a user activating a group enrollment functionality,
  redirecting a user's browser from one domain to another according to a ecommunity domain members list, until each domain within said ecommunity has been visited once, said redirection being performed by
  said user's home domain according to a star topology during which said
  home domain determines and reports the status of each enrollment attempt
  across said e-community, and wherein each affiliated domain within said
  e-community provides an enrollment page with resources required to
  trigger enrollment functionality;
- (d) upon redirection to a first affiliated e-community domain during step (b):

- (i) said home domain single-sign-on plug-in building a home identity cookie having an extensible data area and an enrollment token for the user,
- (ii) redirecting said home identity cookie and enrollment token
  to said first e-community domain via said user's web
  browser;
- (iii) unpacking said enrollment token in said home identity
  cookie by said single-sign-on plug-in at said first affiliated
  domain;
- (iv) building an affiliated domain identity cookie for said user

  by said first affiliated domain single-sign-on plug-in

  including an "enrollment successful" indicator;
- (v) redirecting said affiliated domain identity cookie to said home domain via said user's web browser;
- (vi) upon receipt of said enrollment successful indicator,
  modifying said home identity cookie to include an
  "enrollment successful at first affiliated domain" symbol in
  said extensible data area; and
- (vii) returning said modified home identity cookie to said user's web brower for storage in persistent memory;
- (e) upon redirection to additional domains affiliated in said e-community
  subsequent to redirection to said first affiliated domain, repeating said
  steps of (d)(ii) through (d)(vii) wherein each step performed by said first
  affiliated domain is alternatively performed by said single-sign-on plug-in
  at each additional affiliated domain, thereby building up and accumulating
  "enrollment success" symbols in said extensible data area of said single,
  shared home domain identity cookie upon successful enrollment at each
  additional affiliated domain within said e-community;

when said user's browser is pointed at a given affiliated domain server subsequent to completion of said building of said home domain identity cookie having a plurality of enrollment success symbols, vouching for the identity of the user through exchange of a vouch-for request and vouch-for response between said home domain server and [[an]] said given affiliated domain server; and

building a local session at said given affiliated domain for said user using [[said]] a protected resource of said given affiliated domain responsive to receipt of said vouch-for response .; and

transmitting an e-community cookie from said affiliated domain server to said browser recording successful authentication of said user into said affiliated domain.

## Claim 2 (currently amended):

The method as set forth in Claim 1 wherein said step of enrolling the user at an affiliated domain comprises the steps of:

by said home domain server to a user's browser where it may be stored;
redirecting said enrollment request to an affiliated domain server;
transmitting an affiliated domain identity cookie with an enrollment
response including an enrollment success indicator from said affiliated domain
server to said user's browser:

redirecting said enrollment response with enrollment success indicator to said home domain server where it may be stored;

updating a set of user information at said modifying said home domain identity cookie to record include an enrollment success symbol comprises at said affiliated domain server such that there is a creating a server-maintained persistent record of the user's enrollment at said affiliated domain. ; and

modifying said home domain identity cookie to record enrollment success at said affiliated domain server such that there is a user-maintained persistent record of the user's enrollment so that the user may access and use resources associated with the affiliated domain server.

## Claim 3 (currently amended):

The method as set forth Claim [[2]] 1 wherein said step of redirecting said enrollment request comprises performing a hyper text transfer protocol redirection operation.

## Claim 4 (currently amended):

The method as set forth Claim [[2]] 1 wherein said step of redirecting said enrollment success indicator to said home domain server comprises performing a hyper text transfer protocol redirection operation.

Claim 5 (canceled).

#### Claim 6 (original):

The method as set forth in Claim 1 wherein said step of vouching for the identity of the user comprises the steps of:

transferring said affiliated domain identity cookie with access request for a protected resource from said user's browser to said affiliated domain server;

extracting the user's home domain identity from the affiliated domain identity cookie in order to determine where to send a vouch-for request; sending a vouch-for request from said affiliated domain server to said home domain server via the user's browser using redirection; and returning a vouch-for response to said affiliated domain server from said home domain server via the user's browser using redirection.

## Claim 7 (original):

The method as set forth in Claim 6 wherein said step of sending a vouch-for request from said affiliated domain server to said home domain comprises the step of determining the user's home domain server by evaluation of the user's affiliated domain identity cookie.

## Claim 8 (original):

The method as set forth in Claim 6 wherein said step of sending a vouch-for request from said affiliated domain server to said home domain server comprises performing a hyper text transfer protocol redirection operation.

# Claim 9 (original):

The method as set forth in Claim 6 wherein said step of returning a vouch-for response to said affiliated domain server from said home domain server comprises performing a hyper text transfer protocol redirection operation.

## Claim 10 (original):

A computer readable medium encoded with software for allowing an Internet or intranet browser user to <u>conveniently</u> transfer directly to a domain that is participating in an e-community without repetitious and redundant authentication actions, said e-community comprising a plurality of affiliated domain servers, said user being properly registered and authenticated to a home domain server within said e-community, said software performing causing a processor to perform the steps of:

automatically enrolling said user at [[an]] at a group of affiliated domain domain within said e-community through exchange of a single home domain identity cookie shared among said plurality of affiliated domains with enrollment request and an affiliated domain identity cookie with enrollment response success indicator between said home domain server and an affiliated domain server by:

- (a) defining a minimal group of affiliated domains for automatic enrollment corresponding to a condition selected from the group of user's home domain, and a common set of domains required by all users participating in a given e-community;
- (b) providing a single-sign-on plug-in to said home domain and to each of said affiliated e-community domains;
- responsive to a user activating a group enrollment functionality,
  redirecting a user's browser from one domain to another according to a ecommunity domain members list, until each domain within said ecommunity has been visited once, said redirection being performed by
  said user's home domain according to a star topology during which said
  home domain determines and reports the status of each enrollment attempt
  across said e-community, and wherein each affiliated domain within said
  e-community provides an enrollment page with resources required to
  trigger enrollment functionality;

- (d) upon redirection to a first affiliated e-community domain during step (b):
  - (i) said home domain single-sign-on plug-in building a home identity cookie having an extensible data area and an enrollment token for the user,
  - (ii) redirecting said home identity cookie and enrollment token to said first e-community domain via said user's web browser;
  - (iii) unpacking said enrollment token in said home identity
    cookie by said single-sign-on plug-in at said first affiliated
    domain;
  - (iv) building an affiliated domain identity cookie for said user

    by said first affiliated domain single-sign-on plug-in

    including an "enrollment successful" indicator;
  - (v) redirecting said affiliated domain identity cookie to said home domain via said user's web browser;
  - (vi) upon receipt of said enrollment successful indicator,
    modifying said home identity cookie to include an
    "enrollment successful at first affiliated domain" symbol in
    said extensible data area; and
  - (vii) returning said modified home identity cookie to said user's web brower for storage in persistent memory;
- (e) upon redirection to additional domains affiliated in said e-community
  subsequent to redirection to said first affiliated domain, repeating said
  steps of (d)(ii) through (d)(vii) wherein each step performed by said first
  affiliated domain is alternatively performed by said single-sign-on plug-in
  at each additional affiliated domain, thereby building up and accumulating
  "enrollment success" symbols in said extensible data area of said single,
  shared home domain identity cookie upon successful enrollment at each
  additional affiliated domain within said e-community;

when said user's browser is pointed at a given affiliated domain server subsequent to completion of said building of said home domain identity cookie having a plurality of enrollment success symbols, vouching for the identity of the user through exchange of a vouch-for request and vouch-for response between said home domain server and [[an]] said given affiliated domain server; and

building a local session at said given affiliated domain for said user using [[said]] a protected resource of said given affiliated domain responsive to receipt of said vouch-for response .; and

transmitting an e-community cookie from said affiliated domain server to said browser recording successful authentication of said user into said affiliated domain.

## Claim 11 (currently amended):

The computer readable medium as set forth in Claim 10 wherein said software for enrolling the user at an affiliated domain comprises software for performing the steps of:

step of

by said home domain server to a user's browser where it may be stored;
redirecting said enrollment request to an affiliated domain server;
transmitting an affiliated domain identity cookie with an enrollment
response including an enrollment success indicator from said affiliated domain
server to said user's browser;

redirecting said enrollment response with enrollment success indicator to said home domain server where it may be stored;

updating a set of user information at said modifying said home domain identity cookie to record include an enrollment success symbol comprises at said affiliated domain server such that there is a creating a server-maintained persistent record of the user's enrollment at said affiliated domain.; and

modifying said home domain identity cookie to record enrollment success at said affiliated domain server such that there is a user-maintained persistent record of the user's

enrollment so that the user may access and use resources associated with the affiliated domain server.

## Claim 12 (currently amended):

The computer readable medium as set forth in Claim [[11]] 10 wherein said software for redirecting said enrollment request comprises software for performing a hyper text transfer protocol redirection operation.

#### Claim 13 (currently amended):

The computer readable medium as set forth in Claim [[11]] 10 wherein said software for redirecting said enrollment success indicator to said home domain server comprises software for performing a hyper text transfer protocol redirection operation.

#### Claim 14 (canceled).

#### Claim 15 (original):

The computer readable medium as set forth in Claim 10 wherein said software for vouching for the identity of the user comprises software for performing the steps of:

transferring said affiliated domain identity cookie with access request for a protected resource from said user's browser to said affiliated domain server;

extracting the user's home domain identity from the affiliated domain identity cookie in order to determine where to send a vouch-for request; sending a vouch-for request from said affiliated domain server to said home domain server via the user's browser using redirection; and returning a vouch-for response to said affiliated domain server from said home domain server via the user's browser using redirection.

#### Claim 16 (original):

The computer readable medium as set forth in Claim 15 wherein said software for sending a vouch-for request from said affiliated domain server to said home domain comprises software for determining the user's affiliated domain server by evaluation of the user's home domain identity cookie.

## Claim 17 (original):

The computer readable medium as set forth in Claim 15 wherein said software for sending a vouch-for request from said affiliated domain server to said home domain server comprises software for performing a hyper text transfer protocol redirection operation.

## Claim 18 (original):

The computer readable medium as set forth in Claim 15 wherein said software for returning a vouch-for response to said affiliated domain server from said home domain server comprises software for performing a hyper text transfer protocol redirection operation.

#### Claim 19 (original):

A system for <u>convenient</u> e-community enrollment by an Internet or intranet user using cross-domain single-sign-on to a <u>group of affiliated domains that are domain that is</u> participating in an e-community without repetitious and redundant authentication actions, said e-community comprising a plurality of affiliated domain servers, said user being properly registered and authenticated to a home domain server within said e-community, said system comprising:

a single-sign-on plug-in operatively disposed to a home domain server;

a minimal group of affiliated domains defined in a list for automatic enrollment corresponding to a condition selected from the group of user's home domain, and a common set of domains required by all users participating in a given e-community, said list being accessible by said home domain single-sign-on plug-in;

a plurality of single-sign-on plug-ins, each of which is operatively disposed to an affiliated e-community domain server;

a home domain identity cookie accompanying an enrollment request receivable by an affiliated domain server having a plurality of enrollment success symbols in an extensible data area, said symbols being accumulated by passing said home domain identity cookie by said home domain among said group of affiliated domains, said passing occurring in a star topology centered upon a user's web browser, by:

(a) responsive to a user activating a group enrollment functionality,
redirecting a user's browser from one domain to another according to a ecommunity domain members list, until each domain within said ecommunity has been visited once, said redirection being performed by
said user's home domain according to a star topology during which said
home domain determines and reports the status of each enrollment attempt
across said e-community, and wherein each affiliated domain within said
e-community provides an enrollment page with resources required to
trigger enrollment functionality:

- (b) upon redirection to a first affiliated e-community domain during step (b):
  - (i) said home domain single-sign-on plug-in building a home identity cookie having an extensible data area and an enrollment token for the user.
  - (ii) redirecting said home identity cookie and enrollment token to said first e-community domain via said user's web browser;
  - (iii) unpacking said enrollment token in said home identity cookie by said single-sign-on plug-in at said first affiliated domain;
  - (iv) building an affiliated domain identity cookie for said user by said

    first affiliated domain single-sign-on plug-in including an

    "enrollment successful" indicator;
  - (v) redirecting said affiliated domain identity cookie to said home domain via said user's web browser;
  - (vi) upon receipt of said enrollment successful indicator, modifying
    said home identity cookie to include an "enrollment successful at
    first affiliated domain" symbol in said extensible data area; and
  - (vii) returning said modified home identity cookie to said user's web brower for storage in persistent memory;
- upon redirection to additional domains affiliated in said e-community
  subsequent to redirection to said first affiliated domain, repeating said
  steps of (c)(ii) through (vii) wherein each step performed by said first
  affiliated domain is alternatively performed by said single-sign-on plug-in
  at each additional affiliated domain, thereby building up and accumulating
  "enrollment success" symbols in said extensible data area of said single,
  shared home domain identity cookie upon successful enrollment at each
  additional affiliated domain within said e-community;

an affiliated domain identity cookie accompanying an enrollment response success indicator receivable by said home domain server;

a vouch-for request receivable by a home domain server transmitted by a given affiliated domain upon pointing of said user's web browser to said given affiliated domain; and

a vouch-for response receivable by said affiliated domain server transmitted by said home domain responsive to receipt of said vouch-for request. [[; and]]

an e-community cookie receivable by said browser to record successful authentication of said user into said affiliated domain for the duration of the user's session.

#### Claim 20 (original):

The system as set forth in Claim 19 further comprising:

an enrollment request redirector for redirecting said enrollment request from said home domain server to an affiliated domain server via said browser;

an enrollment response redirector for redirecting said enrollment response with enrollment success indicator to said home domain server from said affiliated domain server via said browser;

a user information manager operable by said home domain adapted to record enrollment success at said affiliated domain server such that there is a server-maintained persistent record of the user's enrollment; and

a home domain identity cookie modifier adapted to record enrollment success at said affiliated domain server such that there is a client-maintained persistent record of the user's enrollment so that the user may access and use resources associated with the affiliated domain server.

## Claim 21 (original):

The system as set forth Claim 20 wherein said enrollment request redirector comprises a hyper text transfer protocol command.

#### Claim 22 (original):

The system as set forth Claim 20 wherein said enrollment response redirector comprises a hyper text transfer protocol redirection command.

Claim 23 (canceled).

# Claim 24 (original):

The system as set forth in Claim 19 further comprising an affiliated domain identity cookie evaluator for extracting the user's home domain identity from said affiliated domain identity cookie in order to determine where to send a vouch-for request.